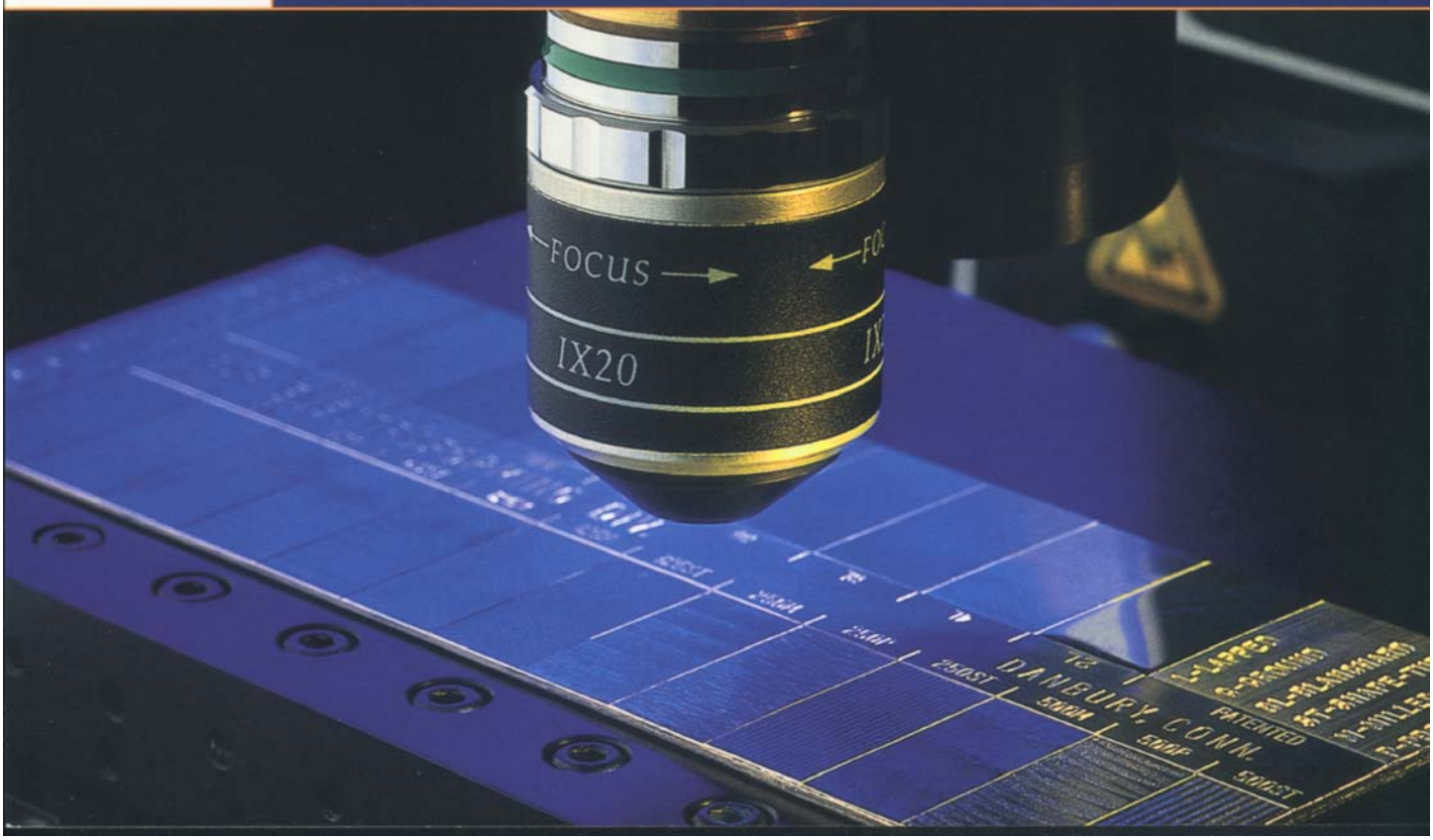
Veeco

Wyko NT Series Optical Profilers

Accurate, Repeatable 3D Metrology

- Non-Contact Measurement for R&D and Production
- Sub-Nanometer Vertical Resolution
- High Speed for Rapid Characterization
- Industry-Leading Analysis Software



Wyko NT Series Optical Profilers

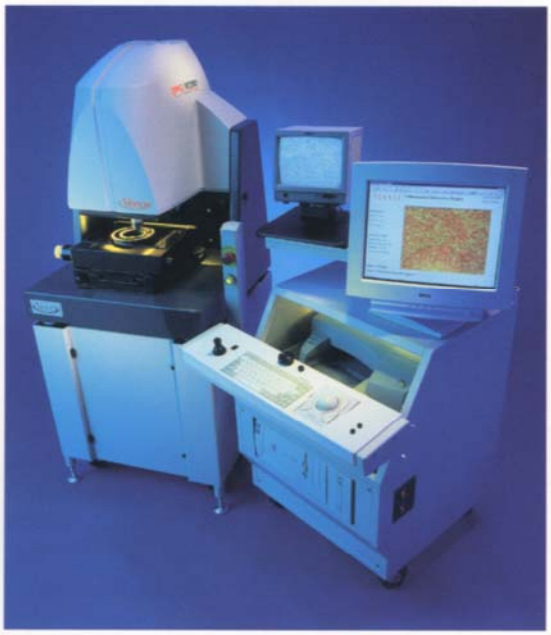
Accurate, Repeatable 3D Metrology

Wyko® NT Series Optical Profilers

NT Series Optical Profilers measure sub-nanometer surface roughness, millimeter-scale steps and other surface topography, with an unmatched combination of resolution, repeatability and speed. The NT Series provides precise, 3D surface details you can rely on for research, product development, process control, and failure analysis. Whether you're proving a concept or perfecting a high volume manufacturing process, NT Series profilers characterize the surface clearly, reliably, and cost-effectively.

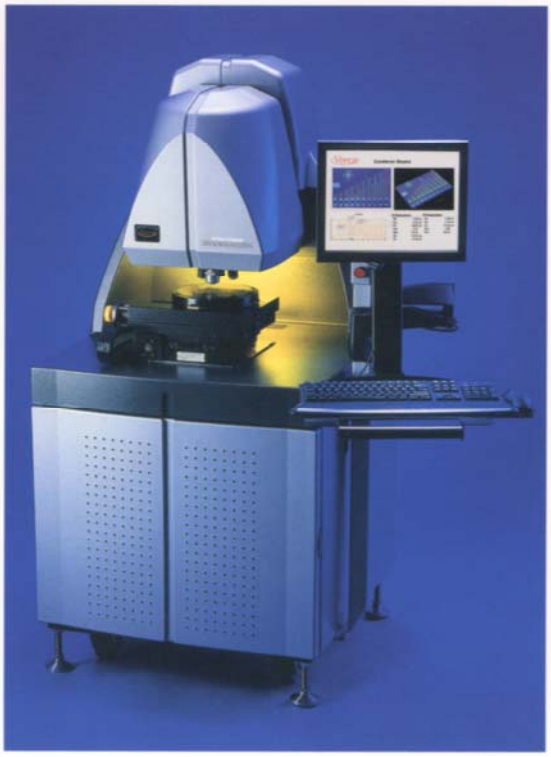
Wyko NT1100: Sub-Nanometer Resolution in a Small Footprint

The NT1100 brings the advantages of Wyko profiling to the bench top. Advanced optics ensure sub-nanometer vertical resolution at all magnifications. The Data Stitching option adds a motorized stage for high resolution over large fields of view. The Dynamic MEMS option lets you measure micro-devices as they actuate, for accurate assessment of MEMS functionality.



Wyko NT3300: Production-Proven Performance

The industry-standard NT3300 offers the flexibility, gauge capability and reliability to support 24/7 production. With push-button simplicity and fast data acquisition, the NT3300 is the tool of choice for process development and quality control.

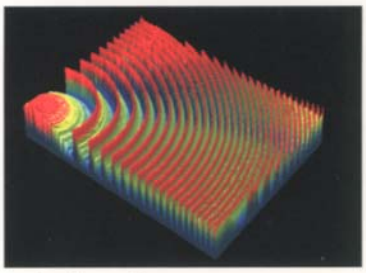


Wyko NT8000: World's Most Capable Optical Profiler

The eighth generation NT8000 is simply the most powerful profiler available, combining 100 µm/sec scan speed, an 8 millimeter scan range, and full automation for demanding research and production applications. A unique, internal reference signal enables self-calibrating accuracy over the entire scan range.

Versatility to Perform

- **Sub-nanometer resolution** for roughness analysis of super-smooth surfaces
- **Large z-range** for extremely high step measurements
- **Fast measurement acquisition** over large lateral areas
- **Sophisticated surface analysis** for 2D and 3D characterization and visualization
- **Gauge-capable, non-contact measurement** for repeatable and reproducible process control
- **Range of automation** for ease of use and maximum throughput

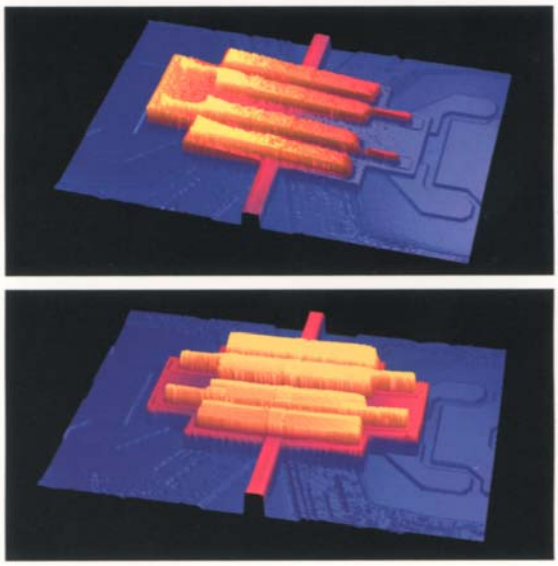


Optics: fresnel lens (courtesy of Glimmerglass)

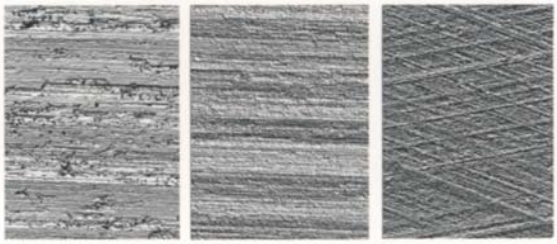
Wide Range of Applications

Today's research, fabrication and failure analysis demand ever-finer details and tighter tolerances. NT Series profilers fill those applications for surfaces that are rough or smooth, hard or soft, adhesive, deflectable, or otherwise difficult to measure. Optical profilers supply the precise surface information for a competitive edge in a vast array of applications:

Optics
Advanced Materials
Machined Metals
MEMS/BioMEMS
Plastics and Polymers
Glass and Ceramics
Paper
Coatings
Automotive Parts
Biomedical Devices
And More.



MEMS: micro-switch in activated and deactivated positions (courtesy of Microlab)



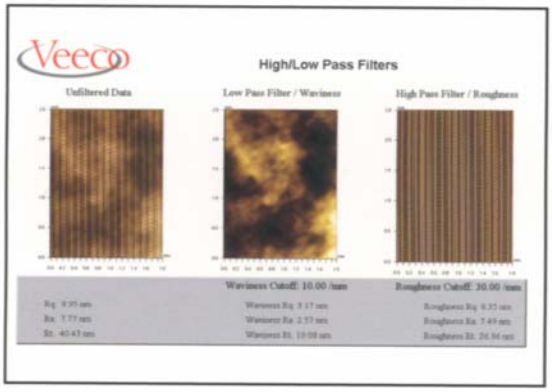
Materials: study of cylinder bore machining processes (courtesy GM Powertrain)

WYKO NT SERIES OPTICAL PROFILERS: COMPARISON CHART

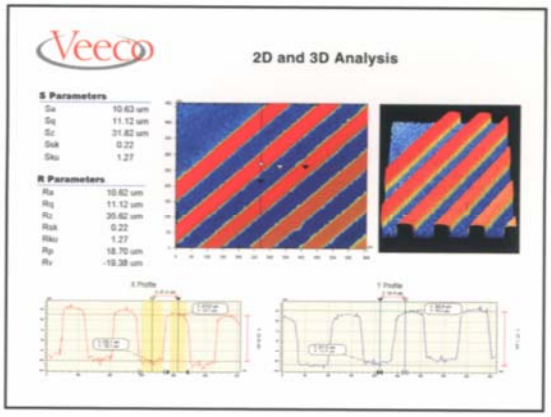
Model	Form Factor	Z Range	Max. Scan Speed	Sample Stage	Z Stage	Optics	Other Automation	Calibration
NT1100	Bench top	1 mm standard; 2 mm optional	7.2 µm/sec	100 mm (4 in) manual; optional 100 mm (4 in) motorized	Manual	Single objective or manual turret; manual field of view multipliers	Focus; stitching optional	Secondary standards
NT3300	Integrated air table	1 mm standard; 2 mm optional	7.2 µm/sec	100 mm (4 in) manual; optional 200 mm (8 in) computer-controlled w/encoders	Motorized	Single objective; manual or motorized self-sensing turret; automated field of view multipliers	Focus, intensity; high-speed autofocus, tip/tilt, stitching optional	Secondary standards
NT8000	Integrated air table	8 mm standard	100 µm/sec	200 mm (8 in) computer-controlled w/encoders	Computer-controlled	Single objective; manual or motorized self-sensing turret; automated field of view multipliers	Focus, intensity; high-speed autofocus, tip/tilt, stitching optional	Self-calibrating to internal primary standard

Wyko Vision

Quantify and Visualize Surfaces with Powerful Analysis Software



High and Low pass digital filtering helps extract both large scale (waviness) and small scale (roughness) effects.



Customizable output screen includes 2D plot, X and Y cross-sections, 3D plot, and R and S surface parameters.

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Wyko Vision® analysis software provides thorough computational analyses, furnishing over 2000 parameters and 200 analyses — an extensive software toolkit for lab and production. Windows®-based Vision includes Wizards, On-Line Help, and customization functions that speed operation and shorten the learning curve.

Statistical Database

Define databases from the extensive list of analysis parameters. Automatic data logging and pass/fail criteria give real-time feedback. Results can be easily exported for data management and SPC.

Customizable Results

Use an intuitive editor to design custom output screens. User-configurable menus and toolbars let you match Vision to the way you work.

Production-Ready

Execute single measurements and production runs from a simple toolbar. Password capability allows operators to perform assigned tasks while protecting data and the operating system.

Flexible Options

Optional analysis and communication packages extend the functionality of NT Series instruments, letting you remotely control measurements and automation, generate custom parameters, and more.

Full Range of Analysis Tools

Analyses

- Interactive 2D and 3D displays
- Texture Analysis / S Parameters
- Confinement Parameters
- Critical Dimensions
- Histogram
- Step Height
- Volume
- Multiple Region Analysis
- Power Spectral Density

Tools

- Data Masking
- Data Filtering
- Auto-Calibration
- Hardware Diagnostics
- Automation GUI
- User-Definable Graphic Displays
- Data Import/Export to Multiple Formats

Worldwide Customer Support from the Industry Leader

Veeco Instruments Inc. is a worldwide leader in metrology tools and process equipment for the semiconductor, data storage, telecommunications/wireless, and scientific research markets. Veeco's manufacturing and engineering facilities are located in New York, California, Colorado, Arizona and Minnesota. Global sales and service offices are located throughout the United States, Europe, Japan and Asia Pacific.